

# Public Private Partnership in India: Pertinence, Performance and Potential

**Dr. B. D Mishra**

*Associate Professor*

*Department of Management Studies*

*Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh,  
India*

**Mushtaq Ahmad Shah**

*Ph. D Scholar*

*Department of Management Studies*

*Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh,  
India*

## Abstract

India, located in South Asia is a large country that ranks second in the world in terms of population and seventh in terms of geographical area. But, India greatly lagged behind economically and socially compared to the developed world one factor which is a drag on its development is the lack of world class infrastructure. As the development of world class infrastructure in tune with the growing needs and also for strengthening and supplementing the existing infrastructure facilities is a herculean task for governments alone especially due to fiscal constraints and other monetary liabilities, Public Private Partnership (PPP) model has emerged and is likely to be encouraged as a preferred mode of funding infrastructure. Though India adopted the mixed economy approach of economic development, the said principle of public-private partnership is still vague in its conception, actual adoption and implementation. The PPP projects are widely implemented in the areas of infrastructure services such as education, health care, transportation, tourism, energy and Urban Development. The objective of this paper is to examine the relevance of the PPP projects implemented in India, their progress and future potential. The study relies on secondary information published by the Department of Economic Affairs, Ministry of Finance, and Government of India. The study highlights the regional disparity in the PPP Projects across Indian states. There is need to focus on social sectors, especially health, education and agriculture which currently accounts very small number of PPP projects in India.

**Keywords: Development, Infrastructure, Investment, Public Private Partnership**

## I. INTRODUCTION

Infrastructure is the basic physical and organizational structures needed for the operation of a society, includes industries, buildings, roads, bridges, health services, governance and so on. It is the enterprise or the products, services and facilities necessary for an economy to function (Sullivan and Sheffrin, 2003). According Dr. VKRV Rao, Efficient and affordable infrastructural services are key to the higher productivity and output growth. the link between infrastructure and development is not a once for all affair, it is a continuous process and progress in development has to be preceded, accompanied and followed by progress in infrastructure, if are to fulfill our declared objectives of self accelerating process of economic development.

To develop the Indian infrastructure to a world class and to remove the infrastructure deficiency in the country, the investment requirements are mammoth, which could not be met by the public sector alone due to fiscal constraints and mounting liabilities of the Government. This calls for participation of private sector in coordination with the public sector to develop the public infrastructure facilities. In this direction, the economic reforms initiated in the country provide forth the policy environment towards public-private partnership (PPP) in the infrastructure development. Sector-specific policies have also been initiated from time to time to enhance the PPP in infrastructure building. While the PPP is spreading to develop basic infrastructure worldwide, in India, the participation of private sector in the infrastructure building has not been much encouraging, despite several rounds of policy reforms. Public Private Partnership (PPP) is a sustained and long-term partnering relationship between the public and private sectors to provide services and goods. Through PPP, the public sector seeks to bring together the resources of the public sector and the technical expertise of the private sectors to provide services and goods to the public at the best value for money (Ministry of Finance, Singapore, 2009). The PPP combines the development of private sector capital and sometimes, public sector capital to improve public services or the management of public sector assets (Micheal,2001). Having this in mind, the question rises, why PPPs represent such a small fraction of all public projects if they deliver benefits such as greater efficiency, timely delivery of public projects, better quality of service provision, etc.? In order to try to answer this, the paper examines the concept of public-private partnership and reviews the advantages, disadvantages, and the reasons why PPPs are implemented. In addition, the paper investigates what PPPs are, what they deliver their progress and future potential

### A. Objective

The objective of this paper is to examine the pertinence of the PPPs, their progress by analyzing the status of PPP in India and highlight the future potential to go through PPP mode of financing infrastructure projects.

## II. PERTINENCE OF PUBLIC-PRIVATE PARTNERSHIP

Some PPP experts are of the view that most developing countries accept the PPP policy as a condition on loans from International Organizations (Jamali 2004; Thomas et al. 2006; Appuhami et al. 2011) while others arouse the argument that some engage in PPP to alleviate poverty in their countries (Bhatia & Gupta 2006). In spite of the controversy about PPP policy in developing countries, most developing economies are facing the vast infrastructure deficit and excessive government debts which in turn has resulted to poor economic development and lower standards of living. This makes it more important for PPP to be explored in these developing countries to boost infrastructure development and improve the living standard of the people

### **A. More Cost-Efficient and more Frequently Completed within Schedule**

One recent study commissioned by Infrastructure Partnership Australia (2007) evaluated the efficiency of PPPs relative to traditional procurement, and found that they were more cost-efficient and more frequently completed within schedule. Given the right incentives, private investors have shown a willingness to invest heavily in new and existing transportation infrastructure, and properly structured contracts can result in cost savings

### **B. Risk Transfer**

The transfer and sharing of project risks is considered by many as one of the main benefits of PPPs. Much of the risk associated with the design, construction, financing, operations, and maintenance of transportation projects is traditionally managed by the government. In contrast, a PPP seeks to allocate Risks to the parties best able to manage them (Bettignies and Ross 2004; U.S.DOT 2004). Three factors drive risk sharing in PPPs. First, the private sector is in charge of a number of activities during the lifetime of the project, including financing, whereas the government usually holds a residual ownership right. Second, the two contracting parties in a PPP arrangement have different stakeholders and different objectives, risk perceptions, and constraints. Third, the public and private partners may have different abilities to diversify the risk (Checherita and Gifford 2008)

### **C. Rate of Return**

The main objective of the private sector in a PPP is to achieve a target return on investment on the equity invested. The European private sector expects a return on its investment of 7% to 17% (Jefferies et al. 2006). Data analysis by Infrastructure Management Group shows that the long-term return on equity on recent concession deals involving “brownfield” toll roads was expected

To be around 12%, whereas returns of 14% or higher were expected on Greenfield projects. Revenue sharing provisions, refinancing regulations, and contract rebalancing provisions are strategies that allow the public sector to benefit from revenues that are higher than projected and/or limit excessive returns to the private sector (NHP) (Mayer 2007).

### **D. Massive Deficit in Infrastructure Services**

In general, huge investments on public infrastructure such as highways, ports, airports, railways, irrigation, education, health, energy, tourism and other public assets have been funded by the government and, in many cases, have added to public debt. PPP can be reducing government’s capital costs and thereby bridging the gap between the need for infrastructure and the Government’s financial capacity.

### **E. Delivery of Services**

The problems of delivery of public services could be improved by allowing both public and private sectors to do what they do best. As each sector takes responsibility on their functions, production and distribution of services could be ensured. In addition, by bringing together the strengths from the public and private sectors, PPP enjoy the ability to share a wide range of resources, technologies and skills in a cooperative manner that can work to improve services delivered to the people. It also facilitates faster delivery of services and delivery of services on time.

### **F. Lifecycle Efficiencies**

In an approach such as design-build-operate-maintain (DBOM), a sole contractor is responsible for several project stages, which gives the private contractor the incentive to lower costs throughout the facility’s lifecycle and reduces possible collaboration delays. According to a 2004 US DOT report to Congress, “public-private partnerships can save from 6 to 40 percent of the cost of construction and significantly limit the potential for cost overruns. (”ROD INF)

### **G. Improved Project Quality**

Several studies have found that P3s can improve the quality in the delivery of a highway project. While little quantitative evidence exists, in its survey of transportation P3 agencies, the University of Minnesota found that the use of a P3 contract method has been effective at encouraging innovation with private expertise and state-of-the-art technologies

### **H. Private Sector Expertise and Skills**

(Akintoye et al., 2003; Jayaseelan and Tan, 2007; Chan et al., 2010; Hwang et al., 2013; Ismail, 2013a and 2013b; Xiong and Zhang, 2014). Highlighted that the main reason for the government opting to implement government projects through PPP is

because the private sector is reputed to have more skills and expertise to efficiently design, construct, operate and maintain projects

On realizing the relevance and advantages of PPPs, several initiatives have been taken up by the Government of India from the turn of this century. In fact, involving private sector in infrastructure projects was felt in the context of financial constraints that limit the ability of the state to engage in social projects and strategies were evolved to create a facilitating framework for PPPs in the year 2003 (Economic Survey 2003-04, Planning Commission : 2004)., More sectors have been opened to PPPs and foreign investment. The levy of user charges is being promoted, regulatory institutions are being set up and fiscal incentives are given to infrastructure projects. Approval mechanism for PPPs in the Central sector has been streamlined through the setting up of Public Private Partnership Appraisal Committee (PPPAC). Standardized bidding and contractual documents have been notified. To address the financing needs to these projects, various steps have been taken such as setting up of the India Infrastructure Finance Company Limited (IIFCL) and Viability Gap Funding (VGF). Dedicated infrastructure funds are also being encouraged to increase the flow of equity investments.

### III. EVOLUTION OF PUBLIC-PRIVATE PARTNERSHIP IN INDIA

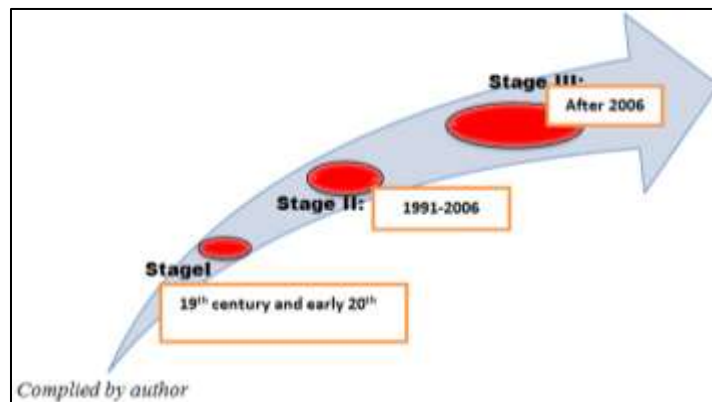


Fig. 1: Evolution of Public-Private Partnership in India

#### A. Phase 1: 19<sup>th</sup> century and early 20<sup>th</sup> century

India had a few notable PPPs as early as the nineteenth century. The Great Indian Peninsular Railway Company operating between Bombay (now Mumbai) and Thana (Now Thane) (1853), the Bombay Tramway Company running tramway services in Bombay (1874), and the power generation and distribution companies in Bombay and Calcutta (now Kolkata) in the early 20th century are some of the earliest examples of PPP in India.

#### B. Phase: II 1991-2006

Since the opening of the economy in 1991 there have been several cautious and tentative attempts at PPP in India. However, most PPPs have been restricted to the roads sector. Large-scale private financing in water supply has so far been limited to a few cities like Visakhapatnam and Tripura. Most PPPs in water supply projects have been through municipal bonds in cities such as Ahmedabad, Ludhiana, and Nagpur. Only 86 PPP projects worth Rs 340 billion awarded till 2004. A study conducted by the World Bank of 13 states in 2005 found only 85 PPP projects awarded by states and select central agencies (not including power and telecom). Their total project cost is Rs 339.5 billion. An optimistic projection of PPPs, growing by five times between 2004 and 2006 to 500 projects is not very encouraging. The largest number of PPP projects is in the roads and bridges sector, followed by ports, particularly Greenfield ports. Apart from these two sectors, there are very few PPP initiatives. According to a Morgan Stanley report, more than Rs 1000 billion worth of PPP projects are under development in India

#### C. Phase: III 1991-2006

In January 2006, the GOI established India Infrastructure Finance Company Limited (IIFCL) under the Companies Act, 1956, as a wholly government-owned company with an authorized capital of Rs 1000 crore and paid-up capital of Rs 10 crore. The IIFCL has been set up to fill the gap for long-term infrastructure finance that banks are not in a position to address. It caters for the burgeoning gap in long-term financing of infrastructure projects in the public sector, PPP, or the private sector. There was an increasing acceptance of PPP model due to favourable policy reforms and innovative PPP structure. According to a Morgan Stanley report, more than Rs 1000 billion worth of PPP projects are under development in India. There was an increasing Growth of PPP from 450 projects costing 2242 billion in Nov, 2009 to 518 projects costing 2738 billion in July 2010.

#### IV. STATUS OF PUBLIC PRIVATE PARTNERSHIP IN INDIA

On January, 2011, there are 1240 PPPs in India with a total project cost of 621171 crores. These projects spread over various sectors like health, education, energy, roadways, Railways, Airports, ports, tourism and urban development. Table 1 indicates the trends in Public Private Partnership projects and their value of contracts during the last five years in India.

Table – 1

Trends in Public Private Partnership Projects in India

Year	Number of projects	value of contract (crores)	cost per project (crores)
2006	15	8280	552
2007	221	129575	586
2008	300	135876	453
2009	450	224176	450
2010	518	273847	529
2011	1240	621171	501

Source: Economic survey, Government of India

It could be seen that the number of PPPs increase steadily from 15 to 518 while the cost of the projects rise from Rs. 8,280 crores to Rs. 273,847 crores during the last years. The cost per project does not show much variation, but increasing mildly during the period under reference. The distribution of the projects by sectors and value of contracts show the divergence among the projects

Table – 2(a)

Sector and state wise classification of PPP projects in different states (Rs. in crores)

S.no.	Name of State	Airports	Ports	Roads	Railways	Total	Average cost per project
1	Maharashtra	5800 (1)	3725 (4)	7606 (13)	—	17131 (18)	951.7222
2	Tamil Nadu	—	2489 (8)	13874 (26)	—	16363 (34)	481.2647
3	Andhra Pradesh	2478 (1)	304 (2)	10214.2 (19)	—	12996.2 (22)	590.7364
4	Kerala	303 (1)	6016 (3)	5446 (6)	—	11765 (10)	1176.5
5	Gujarat	—	2084 (7)	6811.5 (14)	1007 (3)	9902.5 (24)	412.6042
6	Delhi	8600 (1)	—	710 (1)	—	9310 (2)	4655
7	Karnataka	303 (1)	507 (3)	7651 (6)	—	11765 (10)	1176.5
8	Jammu and Kashmir	—	—	6320 (3)	—	6320 (3)	2106.667
9	Uttar Pradesh	—	—	5562 (8)	—	5562 (8)	695.25
10	Rajasthan	—	—	4999 (8)	—	4999 (8)	624.875
11	West Bengal	—	455 (4)	4513 (7)	—	4968 (11)	451.6364
12	Orissa	—	1638 (5)	3042 (4)	—	4680 (9)	520
13	Haryana	—	—	2313 (4)	—	2313 (4)	578.25
14	Bihar	—	—	2091 (5)	—	2091 (5)	418.2
15	Madhya Pradesh	—	—	2039 (6)	—	2039 (6)	339.8333
16	Punjab	—	—	1483 (4)	—	1483 (4)	370.75
17	Jharkhand	—	—	1023 (2)	—	1023 (2)	511.5
18	Chhattisgarh	—	—	838 (4)	—	838 (4)	209.5
19	Meghalaya	—	—	762 (2)	—	762 (2)	381
20	Uttarakhand	—	—	478 (1)	—	478 (1)	487
21	Goa	—	472 (2)	—	—	472 (2)	236
	Total	17484 (5)	17690 (38)	87775.7 (143)	1007 (3)	123956.7 (189)	

Source <http://www.pppinindia.com/database.php>

Figure in brackets indicates number of projects

Table - 2(b)

Distribution of PPP Projects in India by Sectors and value at Central level

S.no.	Sectors	No. of projects	Value of projects in Rs. crores
1	Airports	5 (2.65)	17484 (14.10)
2	Ports	38 (20.10)	17690 (14.27)
3	Roads	143 (75.66)	87775 (70.81)
4	Railways	3 (1.58)	1007 (.81)
	Total	189	123956.7

Source <http://www.pppinindia.com/database.php>

Figure in brackets indicates share of projects

In terms of number of projects, roads and highways are emerging as favoured destinations for PPP. According to the Database, the central governments agencies has active promotion of PPPs in the key Infrastructure sectors, such as roads, railways, airports and ports. This has resulted in a total estimated investment of Rs. 123956.7 crores in 21 states. Maharashtra leads the highest position in value of contracts. Across central agencies, the leading users of PPPs by number of projects have been Tamil Nadu with 34, Gujarat with 24, Andhra Pradesh with 22, Maharashtra with 18 whereas Jharkhand with 2, Meghalaya with 2, Uttarakhand with 1

has least number of projects. Delhi has only 2 projects with an average investment of 4655 crores which is highest among all the states and union territories

It is evident from the above table that the road sector dominates in terms of number of projects 143, accounting for 76 percent of total projects. Ports come second in terms of number of projects, i.e., 38, which is 20 per cent of total projects. The total value of investment in roads amount to 87776 crores which is 70 percent of total where as in Railway it is only 1007 crores which is .8 percent of the total value of investment.

Table - 3(a)  
State wise distribution of projects in terms of investment and value

S No.	State	Investment (Rs) in crores	Projects (Nos.)	Cost Per Project
1	Karnataka	93201.84	117	796.60
2	Uttar Pradesh	68349.88	20	3417.49
3	Haryana	64071.33	25	2562.85
4	Andhra Pradesh	63920.23	178	359.10
5	Maharashtra	57849.95	250	231.40
6	Gujarat	54232	84	645.62
7	Rajasthan	19103.97	96	199.00
8	Sikkim	17105	24	712.71
9	Tamil Nadu	12132	27	449.33
10	Madhya Pradesh	11562.27	64	180.66
11	Orissa	10029.67	32	313.43
12	Kerala	8816	19	464.00
13	West Bengal	4870	30	162.33
14	Pondicherry	3428	3	1142.67
15	Punjab	2624	37	70.92
16	Delhi	2006	9	222.89
17	Chhattisgarh	1628	9	180.89
18	Assam	1495.07	17	87.95
19	Jharkhand	681	9	75.67
20	Chandigarh	75	2	37.50
21	Goa	30	1	30.00
	Total	497215.21	1051	473

Source: www.pppindiadatabase.com

Table - 3(b)  
Sector wise distributions of PPP Projects (State level)

Sector	investment in crores	% Share	Number Of Projects	% share
Education	2618.18	0.526601	28	2.664129
Energy	59087	11.88431	47	4.471931
Forest	309.61	0.062273	7	0.666032
Health	1820.55	0.366171	18	1.712655
Information Technology	3566.13	0.717264	20	1.90295
Ports	89873	18.07637	71	6.755471
Roads	130419.7	26.23162	412	39.20076
Tourism	4508.45	0.906795	91	8.658421
Urban Development	106778.8	21.47666	323	30.73264
industries	71670.72	14.4153	17	1.617507
Agriculture	255	0.051289	2	0.190295
Railways	24448	4.917283	6	0.570885
Airports	1630	0.327846	8	0.76118
Others	200	0.040226	1	0.095147
total	497185.1	100	1051	100

Source: Planning Commission and Infrastructure.gov.in

The regional disparity in the initiatives on PPP projects could be understood by classifying states by number of projects and total value of investment. It could be observed, the leading users of Public Private Partnership Projects have been in Maharashtra (250), Andhra Pradesh (178), Karnataka (117), Rajasthan (96) and Gujarat (84). In states such as Tamil Nadu, Kerala, West Bengal, Punjab and Orissa the number of projects were medium (26 to 50) ,and states like Chhattisgarh with 9 Jharkhand with 9 Chandigarh 2 and Goa with only 1 PPP Projects. the table above clearly reveals that the leading states which has the dominating position in terms of total value of investment under PPPs are Karnataka, Uttar Pradesh, Haryana and Andhra Pradesh with 93201.8, 68349.88, 64071 and 63920 crores respectively

According to the Database, the state governments agencies has active promotion of PPPs in the key Infrastructure sectors, such as urban development, Roads, Railways, information technology, Airports, and Ports has resulted in a total estimated investment of Rs. 497185.1crore in 14 sectors. It is evident from the above table that the road sector dominates in terms of number of projects (412), accounting for 39 percent of total projects. Urban Development comes second in terms of number of

projects, i.e. 323, which is 31 per cent of total projects. The total value of investment in Roads is 130419 which is 26 percent and in Urban Development amount to 106778.8crore which is highest, 21 percent of total where as in Agriculture and Health it is least only 255crore which is 0.05 percent, and 1820 (0.37) percent of total value of contracts.

## V. SUMMARY AND CONCLUSION

Provision of quality and efficient infrastructure services is essential to realize the full Potential of the emerging Indian economy. Indian government's first priority is therefore Rising to the challenge of maintaining and managing high growth through investment in Infrastructure sector. Public-Private-Partnership (PPP) is emerging as the preferred instrument, however, the resources needed are much larger than the public sector can provide and public investment will therefore have to be supplemented by private sector investments, in Public Private Partnership (PPP) mode. In the above discussion it is evident that the PPP has several advantages such as huge investment in public infrastructure, efficient delivery of services, cost-effectiveness, performance-based contracts, risk-sharing, optimum use of assets and long-term investment opportunities. The PPP projects on the said lines have been initiated in various sectors such as health, education, energy, roadways, railways, airports, ports, tourism and urban development, indicating steady progress on it too. However, there are wide disparities in the sector coverage, project size and initiatives across states. PPPs in the areas of education, health care and tourism is low in project size and relatively unattended. There exists a wide disparity in the spread of projects across states. The leading users of PPP are Maharashtra, Andhra Pradesh, Karnataka, Gujarat and Rajasthan.

In the context of new economic reforms and globalization, the scope for PPPs is vast and wide, and likely to take lead in future. Current Prime Minister of India Narendra Modi has rightly said that we need to move from PPP to PPPP, People Public Private Partnership! Shri Modi at Think India Summit. Taking a lead from the above statement, it can be concluded that the need of India is not a PPP but an effective PPP. Imply efficiency gains, efficient use of resources, availability of modern technology and better project design. Which will contribute to faster implementation, reduced lifecycle costs and more optimal risk allocation, as governments create environment to attract private participation, they also need to ensure an equitable distribution of benefits among investors, taxpayers and service users.

## REFERENCES

- [1] Rao, P. S., & Srinivasu, B. (2013). Infrastructure Development and Economic growth: Prospects and Perspective. *Journal Of Business Management & Social Sciences Research*, 2(1), 81-91.
- [2] Facilitating Public – Private Partnership for Accelerated Infrastructure Development in India, Workshop Report, Department of Economic Affairs, Ministry of Finance, Government of India and Asian Development Bank, New Delhi. | 3. GOI (2007).
- [3] Government of India (2005) Scheme for Support to Public Private Partnership in Infrastructure, Ministry of Finance, New Delhi.
- [4] L.Lakshman(2008), public-private partnership in India infrastructure development: issue and options, Reserve bank of India, (2008).
- [5] Nataraj, G. (2007). Infrastructure challenges in South Asia: the role of public-private partnerships (No. 80). ADB Institute Discussion Papers.
- [6] Oyedele, Olufemi A. "Public-Private Partnership (PPP) and Infrastructure Provision in Nigeria."
- [7] Planning Commission (2007) Projections of Investment in Infrastructure during the Eleventh Plan, Government of India, New Delhi.
- [8] Sullivan, A. and Sheffrin, M. S. (2003). *Economics: Principles in action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall.
- [9] The Secretariat for the Committee on Infrastructure, Planning Commission, Government of India (2006), Guidelines for Financial Support to Public Private Partnerships in Infrastructure, [www.infrastructureindia.com](http://www.infrastructureindia.com).
- [10] [www.pppinindia.com](http://www.pppinindia.com).